

Trans Com Roles, Responsibilities, Schedule

February 21, 2019



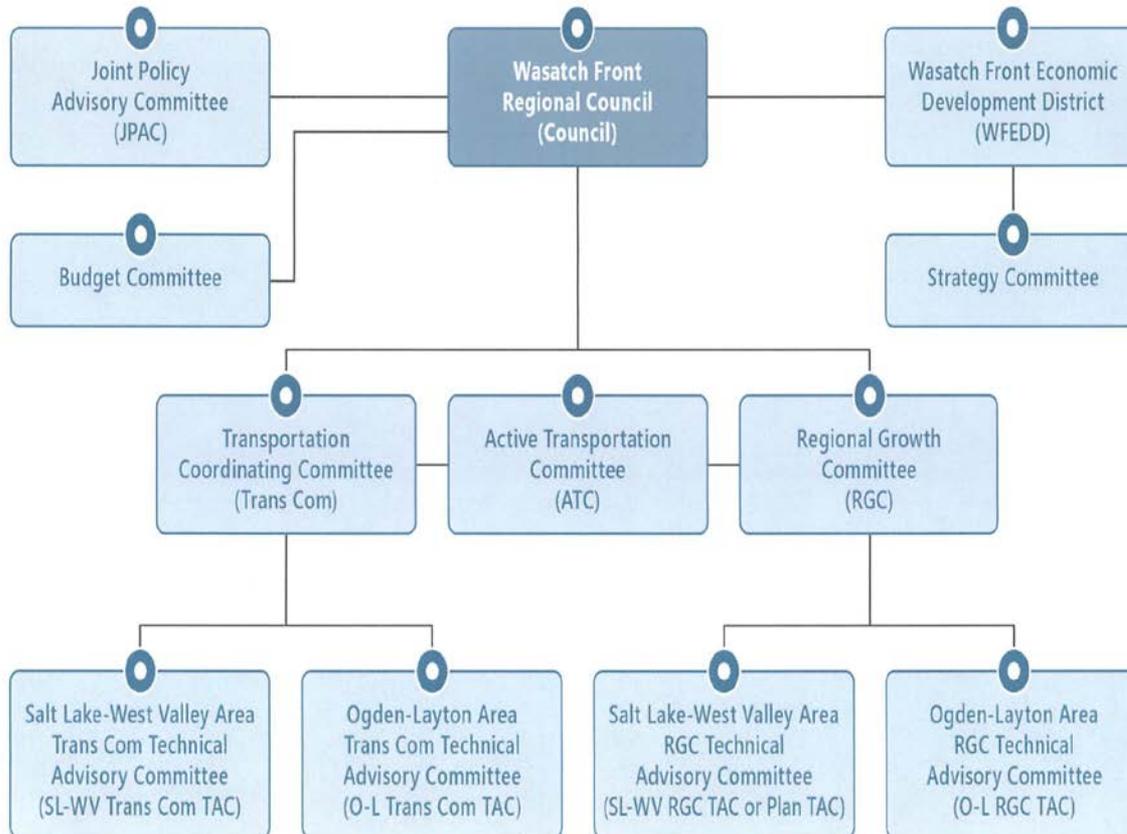
WASATCH FRONT REGIONAL COUNCIL

Wasatch Front Regional Council

- Metropolitan Planning Organization (MPO)
- Responsible, in collaboration with UDOT, UTA, and local governments for developing and approving long- and short-range transportation plans and programs
- Provides opportunities to address transportation and growth needs



Organization and Membership



Origin and Role of Trans Com

- Established by Memorandum of Agreement among WFRC, UDOT, and UTA
- Continuous, comprehensive, and cooperative planning process
- Advise Regional Council on short-range planning and programming



Transportation Improvement Program

- Six-year program of highway, transit, and active transportation projects to which funding has been committed
- Last two years are projects in concept development
- Includes federal, state, and locally funded projects
- Updated annually



Trans Com Responsibilities

- Approve draft Transportation Improvement Program (TIP) for public comment
- Recommend TIP for approval
- Recommend or approve amendments to TIP
- Recommend projects for Surface Transportation Program (STP), Congestion Mitigation Air Quality (CMAQ) Program, and Transportation Alternatives Program (TAP)
- Provide input on transportation priorities



Trans Com Schedule

TIP

- June – Release TIP for public comment
- August - Recommend TIP approval
- Each meeting – TIP Amendments

STP, CMAQ, TAP

- November – Review letters of intent
- April – Recommend STP, CMAQ, and TAP









T



P



Transportation Improvement Program is . . .

1. Six Year Program of Highway, Transit, and Active Transportation Projects
 - Four Years Funded - Two Years Concept
2. In the Urban Areas
 - Salt Lake/ West Valley - Ogden/ Layton
3. Funded by
 - Federal, State, & Local Programs
4. For All Cities, Counties, UDOT & UTA



Transportation Improvement Program will . . .

1. Implement the Long Range Plans
 - Highway/ Transit and Active Transportation Projects for the Region
2. Help Meet the Short Range Needs
 - Of the Wasatch Front Area
3. Provide for the Maintenance
 - Of the Existing Transportation System



Transportation Improvement Program Contains

- **Lists of Projects**
- **Including;**
 - **New Construction**
 - **Rehab & Maintenance**
 - **Safety/ ITS**
 - **Transit, O & M**
 - **Pedestrian & Bike**

TIP Projects in the TIP:

- Represent \$ Millions
- Thousands of Jobs
- Economic Growth & Development
- Mobility/ Access
- Preservation of Life
- And Promote the Quality Of Life

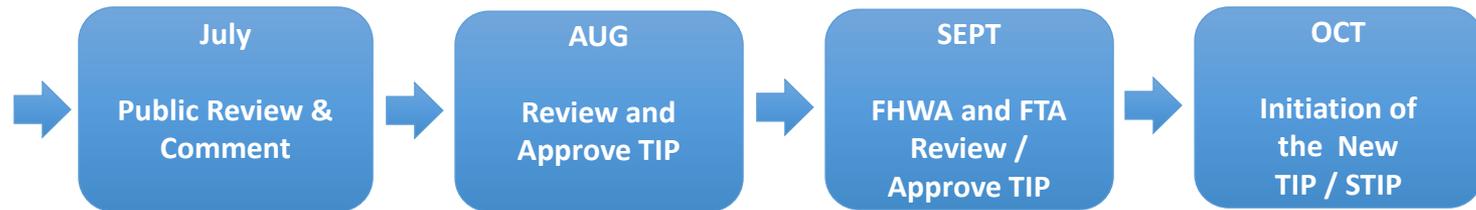


Federal Law

Requires:

- **Financially Constrained**
- **Conform To Air Quality**
- **Reviewed By the Public**
- **Approved by Regional Council**

Process for New Projects & The Draft TIP





Transportation Improvement Program - Today . . .

- 5a. Report on Approved Board Modification
 - Regional Council – January 24, 2019
- 5b. Approve New Board Modification
 - To the 2019-2024 TIP
- 5c. Review the Federal Funds Obligated during this past Federal Fiscal Year 2018

5a - 2019-2024 TIP Board Modification

Wasatch Front Regional Council
January 24, 2019

Ben Wuthrich
Wasatch Front Regional Council



2019-2024 Transportation Improvement Program (TIP) (Amendment Three)

Board Modification

Additional Funding

Salt Lake/ West Valley Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Salt Lake	West Valley City	4100 South	14831	4100 South; Bangerter Highway to 5460 West Project	Reconstruction with minor improvements to Drainage, Curb, Gutter and Sidewalk	LOCAL_GOV (Local Government Funds)	\$20,718,478	\$0	Additional Funding	\$4,230,000	2019
						LOCAL_MATCH (Local Matching Funds)		\$815,311			
						L_BETTERMENT (Local Government - Betterment CO-OP)		\$0	Additional Funding	\$4,445,484	
						STP_HIF_SL (Highway Infrastructure Funds - Salt Lake)		\$3,421,462			
						STP_URB_SL (Surface Transportation Program - Urban Area Salt Lake (WFRC))		\$7,806,221			

West Valley City, in coordination with UDOT and WFRC, will fully reconstruct 4100 south between Bangerter Highway and 5460 West.

The current project value is \$12.3 million. • Granger Hunter Improvement District will be adding \$3.94 million as a betterment to replace water lines. • West Valley City will be adding \$426K as a betterment for landscaping and buried power. • West Valley City will also be adding \$4.23 million to complete the project as originally scoped.

Salt Lake	UDOT	SR-154	14415	Bangerter Highway Interchange Projects at 6200 South, 10400 South, and 12600 South	New Construction of Grade Separated Interchanges	ST_TIF (State Transportation Investment Fund)	\$182,000,000	\$159,000,000	Additional Funding	\$23,000,000	2019
-----------	------	--------	-------	--	--	--	---------------	---------------	---------------------------	---------------------	------

Region Two is requesting to add \$23,000,000 of ST_TIF funds to this project. Initial cost estimates for these intersection/ interchanges were re-evaluated due to recent pricing that has been encountered on previous interchanges. The additional funds being requested are to address increased right-of-way costs, project material and labor escalation costs at all 3 interchanges. The projects will be combined into one project (PIN 14415). Combining these projects will allow for better coordination with work activities and impacts to the public. These projects are scheduled to be constructed in 2020. Projects include - (6200 South @ Bangerter Highway) with a project value of \$64,000,000, - (10400 South @ Bangerter Highway) with a project value of \$46,000,000. - (12600 South @ Bangerter Highway) with a project value of \$49,000,000.

Salt Lake	UDOT	I-15	15669	I-15; NB Bangerter Highway to I-215	Add a Lane and Construction of a collector/ distributor System	ST_TIF (State Transportation Investment Fund)	\$165,000,000	\$150,000,000	Additional Funding	\$15,000,000	2019
-----------	------	------	-------	-------------------------------------	--	--	---------------	---------------	---------------------------	---------------------	------

Region Two is requesting to add an additional \$15,000,000 ST_TIF funds to the I-15 Northbound Bangerter Highway to I-215 project. The cost increase on this project is coming from escalations in Design-Build construction activities (labor and materials) and higher than anticipated right of way costs. The I-15 NB project will improve traffic operations on I-15 between Bangerter Highway and I-215. The improvements include a collector/distributor system between approximately 9400 South and I-215 and an additional general purpose lane from Bangerter Highway to 9400 South.

2019-2024 Transportation Improvement Program (TIP) (Amendment Three)

Board Modification

Additional Funding

Salt Lake/ West Valley Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Salt Lake	Bluffdale	Porter Rockwell Boulevard	13112	Porter Rockwell Blvd (Fourth Segment); East Jordan Canal and 15800 South to 0.5 miles east	New Construction of a 5-lane facility	STP_URB_SL (Surface Transportation Program - Urban Area Salt Lake (WFRC))	\$12,161,100	\$6,036,363	<i>Additional Funding</i>	\$3,000,000	2019
						LOCAL_INKIND (Local In Kind (Soft Match))		\$438,337			
						LOCAL_GOVT_SLCO (Local Gov - Salt Lake County - Transportation Choice Fund (4th Quarter))			<i>Additional Funding</i>	\$2,000,000	

Bluffdale is requesting approval of additional funding for the Porter Rockwell Blvd - Segment 4. This segment will complete the section between Segment 5 and the bridge to be constructed following the completion of segment 4. The bridge is being funded through the Transportation Investment fund (TIF). Once completed this facility will function as a major arterial road that extends from Mountain View Corridor in Herriman to I-15. Reasons for the increased project cost include a much higher construction rate of inflation than originally estimated, an increased amount of roadway excavation for lowering the road profile, and the reduction of side slopes to a less steep slope because of poor soils. The City is currently coordinating with UDOT, Salt Lake County, and WFRC to remedy the project funding shortfall to enable the project to advertise as quickly as possible to minimize additional project cost inflation.

Ogden/ Layton Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Davis	UDOT	SR-105	16434	Parrish Lane (SR-105); I-15 to Main Street (SR-106)	Pavement Rehabilitation	STP_FLX_ST (Surface Transportation Program - Flexible (Any Area) Statewide)	\$1,900,000	\$1,400,000	<i>Additional Funding</i>	\$500,000	2019

Region One is requesting to add an additional \$500,000 ST_FLX_ST funds to the Parrish Lane (SR-105) rehabilitation project. The additional funds for this request are available from the unprogrammed balance in Region One's Transportation Solutions Program. The funding addition is needed to offset the increased cost of materials from the original Engineer's Estimate.

2019-2024 Transportation Improvement Program (TIP) (Amendment Three)
Board Modification

New Project

Ogden/ Layton Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Davis	UDOT	SR-93	16664	SR-93 Intersection Improvements at Wildcat Way	Intersection Improvements	ST_TRANS_SOL (State Transportation Solutions)	\$235,000	\$0	<i>New Project</i>	\$235,000	2019

Region One is requesting to add a new project to improve the intersection at SR-93 and Wildcat Way. The additional funds for this request are available from the unprogrammed balance of Region One's Transportation Solutions Program. This project is currently on the Region's unfunded transportation priority list. The Region has developed a solution to increase the queue length for the left hand turn from SR-93 to northbound Wildcat Way. Currently the left hand turns are backing into thru traffic and this project will increase storage or provide dual left turns at this intersection, and will improve the overall intersection operation.

Davis	UDOT	SR-227 & SR-225	17227	Farmington 200 West (SR-227); I-15 to Main Street and Park Lane (SR-225); Main Street to Lagoon Frontage Rd	Pavement Rehabilitation	STP_FLX_ST (Surface Transportation Program - Flexible (Any Area) Statewide)	\$3,250,000	\$0	<i>New Project</i>	\$3,250,000	2019
-------	------	-----------------	-------	---	-------------------------	--	-------------	-----	--------------------	--------------------	------

Region One is requesting to add a new project, to improve the pavement sections identified on 200 West and Park Lane. The pavement on these two sections of SR-227 and SR-225 is beginning to degrade faster than anticipated. The proposed pavement rehabilitation will prolong the overall life of the existing pavement sections. The \$3,250,000 in additional STP_FLX_ST funds comes from the available unprogrammed balance of the Region One Transportation Solutions Program.

5b - 2019-2024 TIP Board Modification

Trans Com
February 21, 2019

Ben Wuthrich
Wasatch Front Regional Council



**2019-2024 Transportation Improvement Program (TIP) (Amendment Four)
Board Modification**

Additional Funding

Ogden/ Layton Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Weber	UDOT	SR-97	15642	5500 So/5600 So (SR-97); 5600 West (SR-37) to 3000 West	Pavement Rehabilitation	STP_FLX_ST (Surface Transportation Program - Flexible (Any Area) Statewide)	\$1,750,000	\$1,250,000	Additional Funding	\$500,000	2019

Region One is requesting to add an additional \$500,000 ST_FLX_ST funds to the 5500 So/5600 So (SR-97) rehabilitation project. The additional funds for this request are available from the unprogrammed balance in Region One's Transportation Solutions Program. After additional evaluation for the pavement preservation project, it was determined that the top 1.5 inches of asphalt needed to be removed instead of being overlaid to maintain the existing transitions into driveways, side streets and curb sections and to also provide a smoother ride on SR-97.

Davis/ Weber	UDOT	SR-60	16630	South Weber Drive (SR-60); SR-168 (North Gate HAFB) to US-89	Pavement Preservation (Orange Book) Program	STP_FLX_ST (Surface Transportation Program - Flexible (Any Area) Statewide)	\$4,000,000	\$3,000,000	Additional Funding	\$1,000,000	2019
-----------------	------	-------	-------	--	---	--	-------------	-------------	---------------------------	--------------------	------

Region One is requesting to add an additional \$1,000,000 ST_FLX_ST funds to the South Weber Drive pavement preservation project. The additional funds for this request are available from the unprogrammed balance in Region One's Transportation Solutions Program. Project estimated costs have increased, due to higher than planned costs for major bid items, as well as specific areas have been identified that have an increased pavement application.

Salt Lake/ West Valley Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Salt Lake	Sandy	9270 South	13114	9270 South & State Street; 150 East to State Street	Intersection Improvements and Signal Installation	STP_URB_SL (Surface Transportation Program - Urban Area Salt Lake (WFRC))	\$6,432,000	\$3,203,756	Additional Funding	\$2,792,798	2020

This project will realign the intersection at 9270 South between State Street and 150 East and install a traffic signal. By improving this intersection, mobility and safety will improve in all directions for vehicle, pedestrian, and bicycle traffic. The project cost increase is a result of additional right of way and inflated cost associated with anticipated project construction. Sandy City requests additional Salt Lake/ West Valley Urban STP funds for the 9270 South intersection Realignment project. The additional funding will come from project cost savings and funding made available from projects withdrawn from the federal program.

Project Removed

Salt Lake/ West Valley Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Salt Lake	Sandy	Sego Lily	15909	Sego Lily Drive (10000 South) & State Street Intersection	Intersection Improvement	STP_URB_SL (Surface Transportation Program - Urban Area Salt Lake (WFRC))	\$1,591,000	\$1,143,054	Funding Removed	\$1,143,054	2019

Sandy City requests that this project be removed to increase the level of available funding. The City will construct this project at a later time with development and their own resources.

Salt Lake	Sandy	450 West	14941	450 West/9000 South U-Turn; 8775 South to 8871 South	Intersection Improvement	CMAQ_WFRC (Congestion Mitigation/ Air Quality (WFRC))	\$1,386,600	\$1,292,727	Funding Removed	\$1,292,727	2019
-----------	-------	----------	-------	--	--------------------------	--	-------------	-------------	------------------------	--------------------	------

Sandy City requests that this project be removed to increase the level of available funding. The City will resubmit this project concept at a later time to compete for future programming.

Weber – 5500 So/5600 So (SR-97); 5600 West (SR-37) to 3000 West Pavement Rehabilitation (Purple Book) Program

**Additional Funding from
Un-programmed
Transportation Solutions
Program (TSP Funds)**



**Additional Funding
\$500,000**

**Total Project Cost
Estimate \$ 1,750,000**

**Additional
Funding**

• Project will rotomill off the top 1.5 inches and overlay 1.5 inches to maintain the existing pavement transitions.



Weber – South Weber Drive (SR-60); SR-168 (North Gate HAFB) to US-89 Pavement Preservation (Orange Book) Program



Additional Funding from
Un-programmed
Transportation Solutions
Program (TSP Funds)



**Additional
Funding**

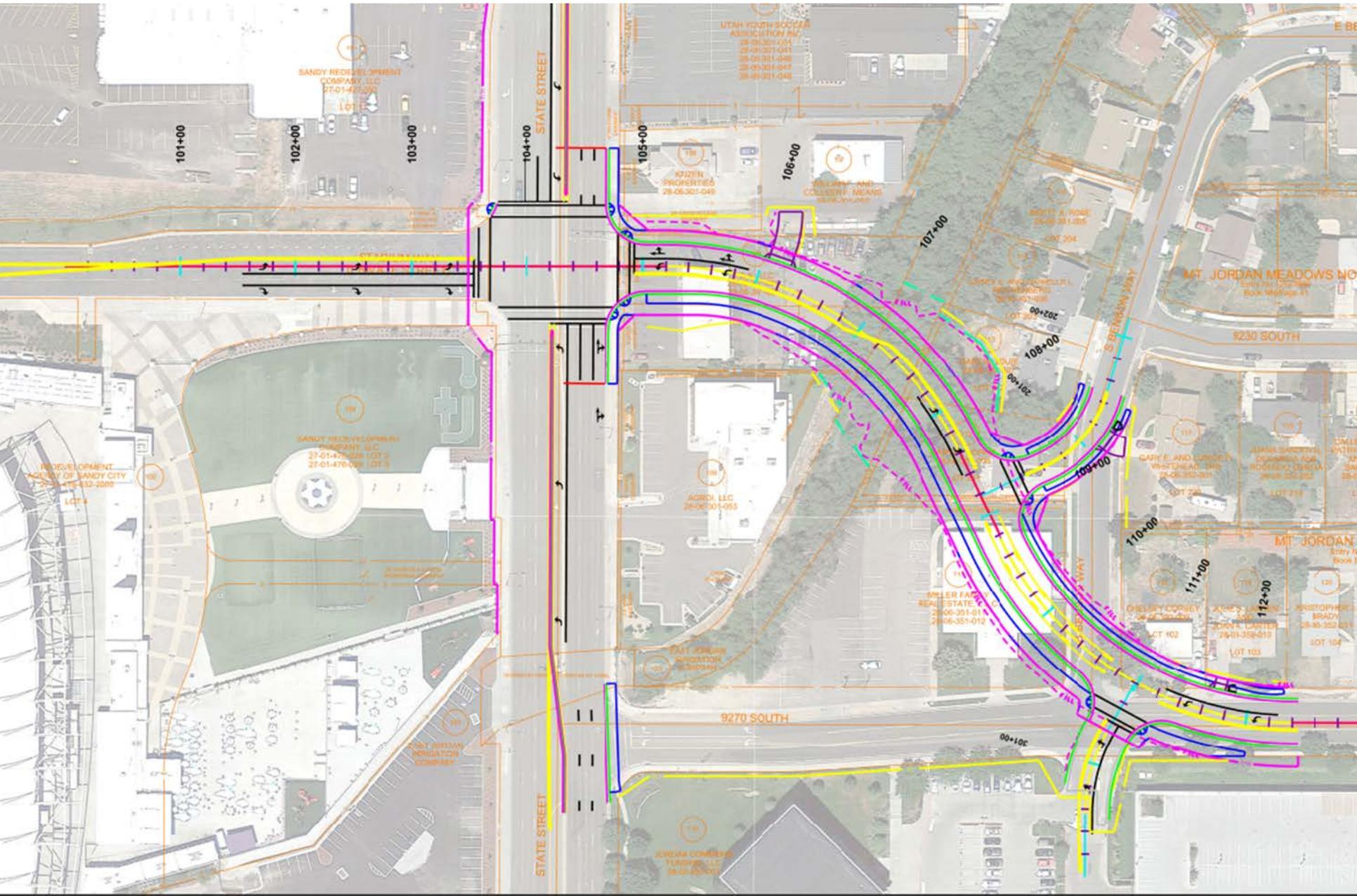
Project will apply pavement preservation treatments to increase the pavement life.

Additional Funding
\$1,000,000

Total Project Cost
Estimate \$ 4,000,000



Salt Lake – 9270 South & State Street; 150 East to State Street Intersection Improvements and Signal Installation

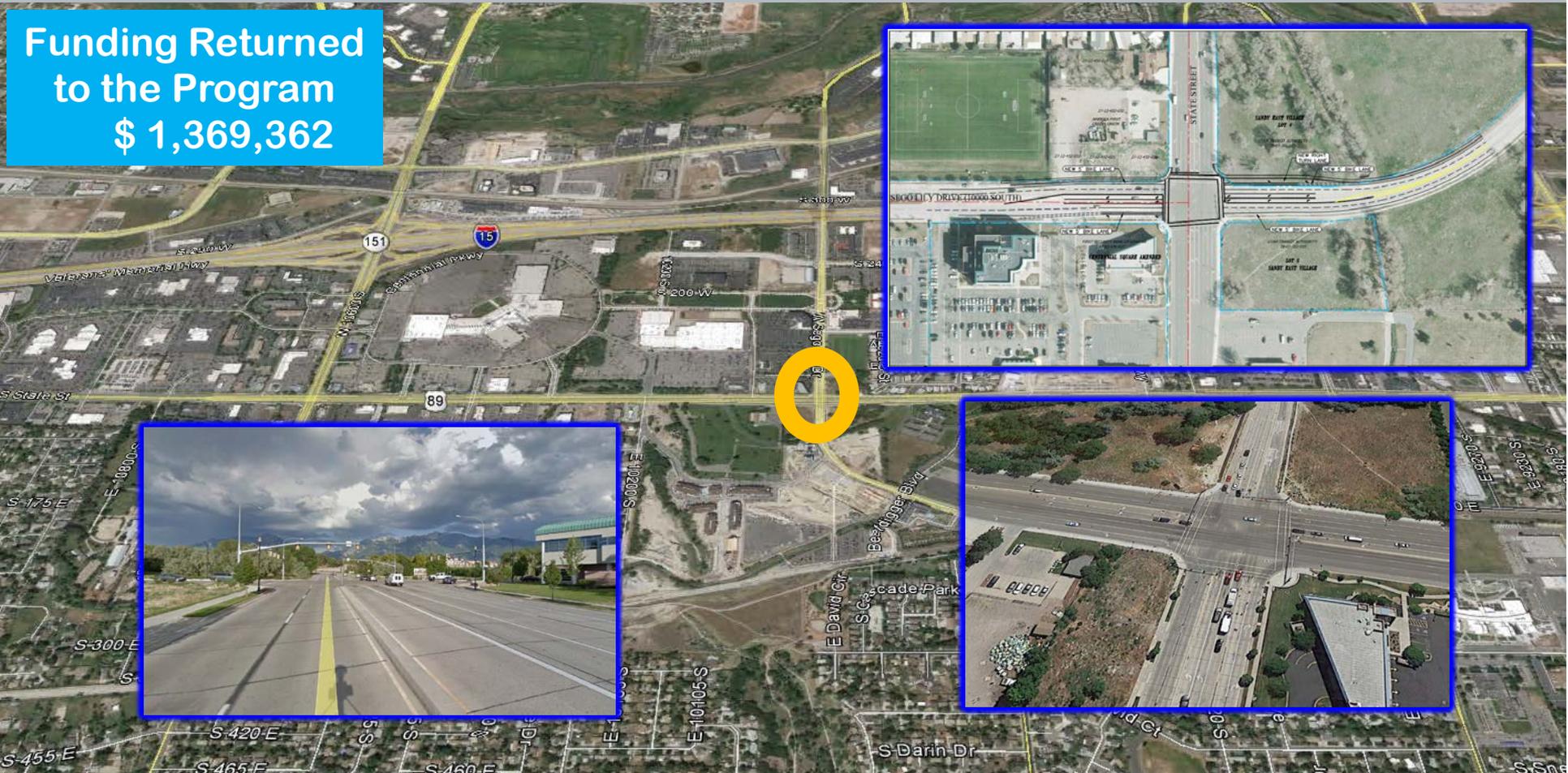


Sandy City – Sego Lily Drive Intersection

Project Type – Intersections & Signals

Sego Lily Drive and State Street Intersection

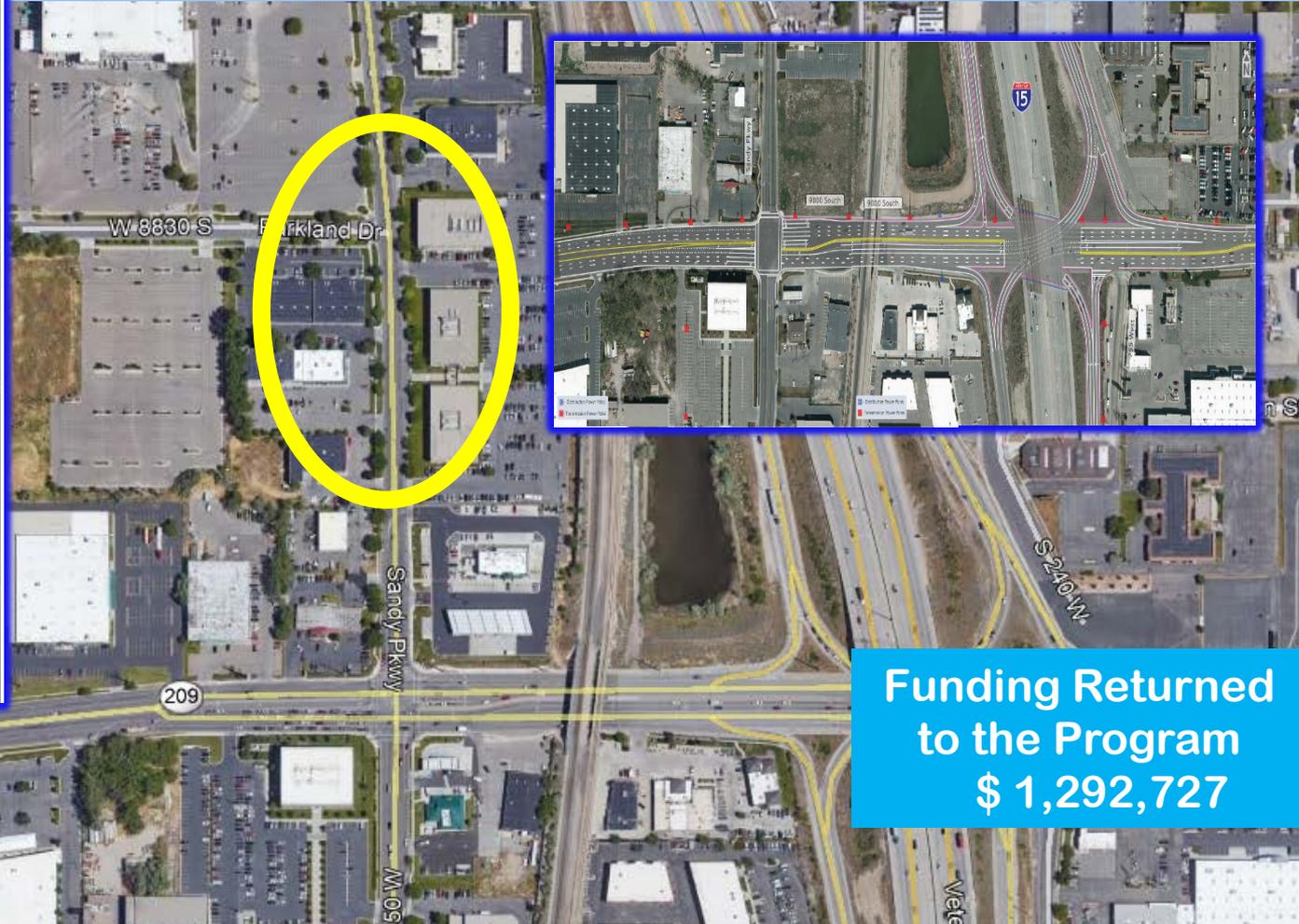
Funding Returned
to the Program
\$ 1,369,362



State St. and 10000 S. is a choke point for bicycle traffic. This project will allow for bike lanes on 10000 South by widening the north side of the intersection. A right turn pocket will also be added for WB traffic. 10000 South is identified by UCATS, WFRC, Salt Lake County, and Sandy City as a priority bicycle route.

Sandy – 450 West/9000 South U-Turn Project Type – Intersections & Signals

8775 South to 8871 South



**Funding Returned
to the Program
\$ 1,292,727**

During the peak travel hours the intersection of 9000 S/450 W causes significant delays due to congestion. An analysis was conducted for ways to mitigate and minimize congestion. This project consists of adding a U-turn on the north leg of the intersection in order to give an alternate for those making the westbound left movement.

**Salt Lake – 9270 South & State Street; 150 East to State Street
Intersection Improvements and Signal Installation**

Current Project Funding \$ 3,453,000

Updated Project Cost \$ 6,432,000

Project Cost Shortfall of \$3,228,244

Federal Shortfall would be \$ 2,792,798

**Request is for additional Salt Lake/ West Valley
Urban STP funds \$2,792,798**

**Additional Funding available from
project cost savings and favorable
bids on other STP projects**

2019-2024 Transportation Improvement Program (TIP) (Amendment Four) Board Modification

New Project

Salt Lake/ West Valley Urban Area

County	Sponsor	Facility	PIN	Project Location	Concept/ Type of Improvement	Funding Source	Project Estimated Cost	Currently Funded Amount	Action	Funding Amount	Year
Salt Lake/ Tooele	UDOT	I-80	16443	I-80; Westbound Auxiliary Lane; SR-201 to SR-36	New Construction of an Auxiliary Lane	HSIP (Highway Safety Improvement Program)	\$2,800,000	\$0	<i>New Project</i>	\$2,800,000	2019

Region Two is requesting to add a new project to construct an aux lane on westbound I-80 from SR-201 to SR-36. The construction of an aux lane will improve safety by reducing conflict points and minimizing current vehicular weaving movements. The additional funds for this request are available from unprogrammed HSIP funds, favorable bids on other Highway Safety projects, and from Region Two's Transportation Solutions Program.

Salt Lake	White City	Sandy Canal	17405	Sandy Canal; Carnation Drive to 10600 South	Construct Section of Missing Bike/ Pedestrian Trail	UDOT R2 TAP (UDOT Region Two Transportation Alternatives Program)	\$350,000	\$0	<i>New Funding</i>	\$250,000	2019
-----------	------------	-------------	-------	---	---	--	-----------	-----	--------------------	------------------	------

UDOT TAP Contribution \$250,000, Local Contribution \$100,000, Total Project Cost \$350,000

Salt Lake	Salt Lake County	8600 South	17372	8600 South; 1530 East to 1676 East	Construct Sections of Missing Sidewalk	UDOT R2 TAP (UDOT Region Two Transportation Alternatives Program)	\$239,459	\$0	<i>New Funding</i>	\$179,594	2019
-----------	------------------	------------	-------	------------------------------------	--	--	-----------	-----	--------------------	------------------	------

UDOT TAP Contribution \$179,594, Local Contribution \$59,865, Total Project Cost \$239,459

Tooele	Grantsville	Durfee Street	17366	Durfee Street; Quirk to Willow Street	Construct Sections of Missing Sidewalk	UDOT R2 TAP (UDOT Region Two Transportation Alternatives Program)	\$233,270	\$0	<i>New Funding</i>	\$174,952	2019
--------	-------------	---------------	-------	---------------------------------------	--	--	-----------	-----	--------------------	------------------	------

UDOT TAP Contribution \$174,952, Local Contribution \$58,318, Total Project Cost \$233,270

Salt Lake	Millcreek	4705 South	17368	4705 South; 1380 East to 1450 East	Construct Sections of Missing Sidewalk	UDOT R2 TAP (UDOT Region Two Transportation Alternatives Program)	\$70,325	\$0	<i>New Funding</i>	\$52,744	2019
-----------	-----------	------------	-------	------------------------------------	--	--	----------	-----	--------------------	-----------------	------

UDOT TAP Contribution \$52,744, Local Contribution \$17,581, Total Project Cost \$70,325

Salt Lake	Kearns/ SL Co	6000 South	17370	6000 South; 5600 West to 5565 West	Construct Sections of Missing Sidewalk	UDOT R2 TAP (UDOT Region Two Transportation Alternatives Program)	\$41,190	\$0	<i>New Funding</i>	\$30,892	2019
-----------	---------------	------------	-------	------------------------------------	--	--	----------	-----	--------------------	-----------------	------

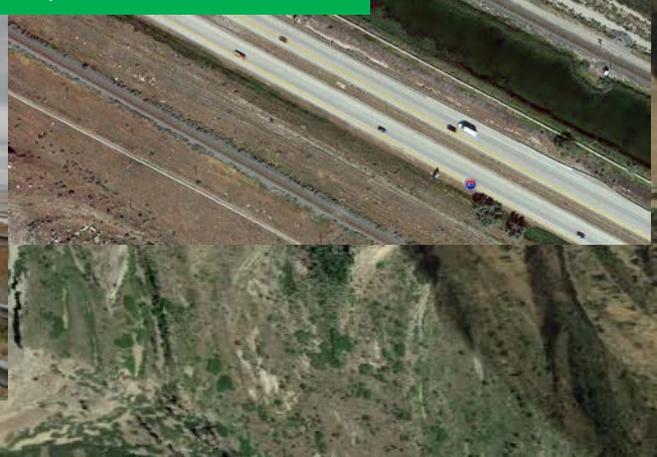
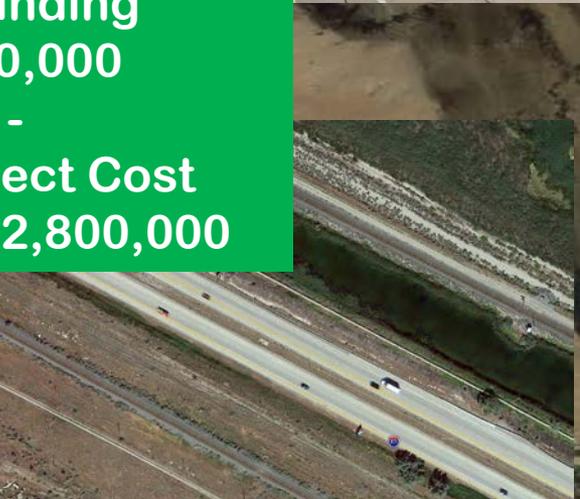
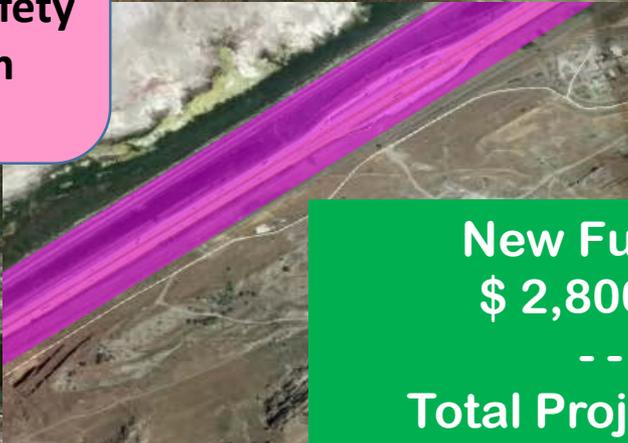
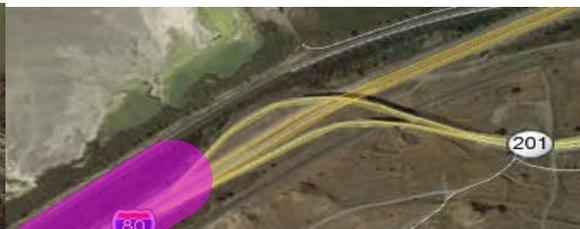
UDOT TAP Contribution \$30,892, Local Contribution \$10,298, Total Project Cost \$41,190

Salt Lake	Sandy	1700 East	New PIN	1700 East; Wasatch Blvd to 11400 South	Construct Bike Lanes	UDOT R2 TAP (UDOT Region Two Transportation Alternatives Program)	\$268,605	\$0	<i>New Funding</i>	\$150,000	2019
-----------	-------	-----------	---------	--	----------------------	--	-----------	-----	--------------------	------------------	------

UDOT TAP Contribution \$150,000, Local Contribution \$118,605, Total Project Cost \$268,605

Tooele – I-80; Westbound Auxiliary Lane; SR-201 to SR-36

New Construction of an Auxiliary Lane



**Project Funding from
Un-programmed and Cost
Savings from Highway Safety
Improvement Program
Funded projects**

**New Funding
\$ 2,800,000

Total Project Cost
Estimate \$ 2,800,000**



**New
Project** Project will construct an
auxiliary lane on WB I-80
from SR-201 to SR-36

Sandy Canal; Carnation Drive to 10600 South Construct Section of Missing Bike/ Pedestrian Trail



**Program Year
2019**

Estimated Cost

\$ 350,000

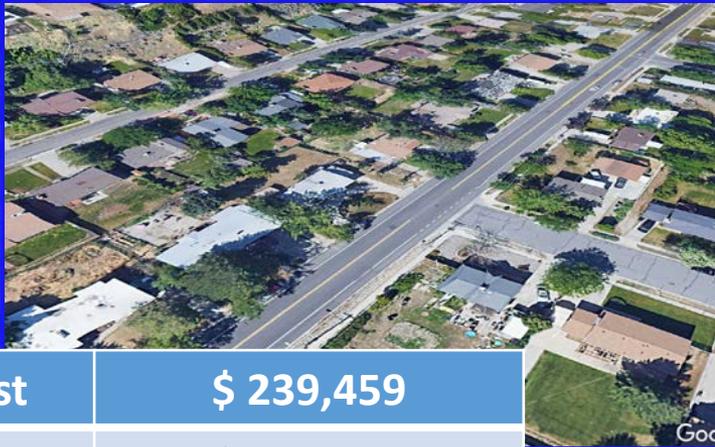
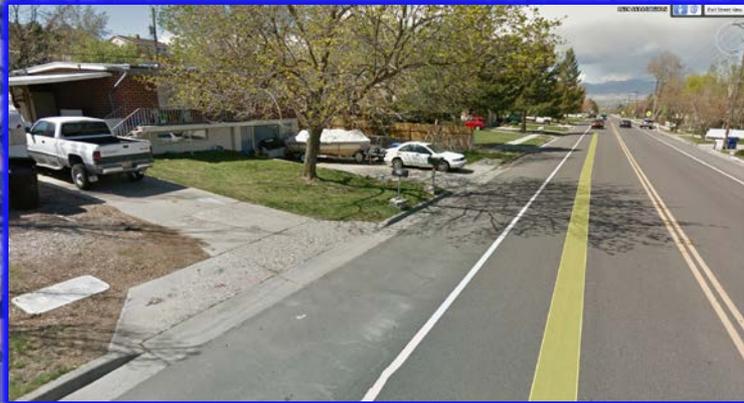
TAP Funding

\$ 250,000

Local Funding

\$ 100,000

8600 South; 1530 East to 1676 East Construct Sections of Missing Sidewalk



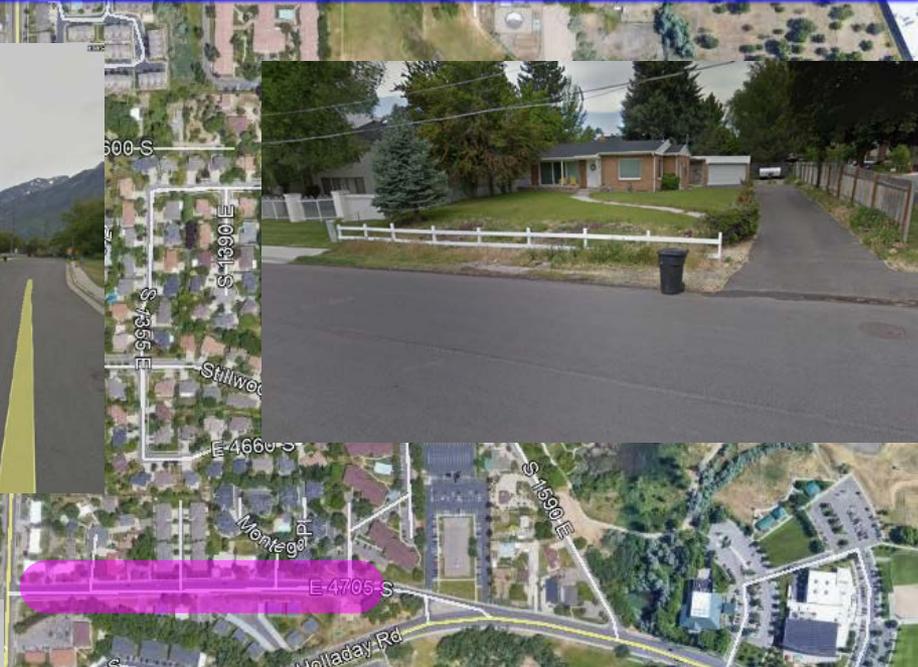
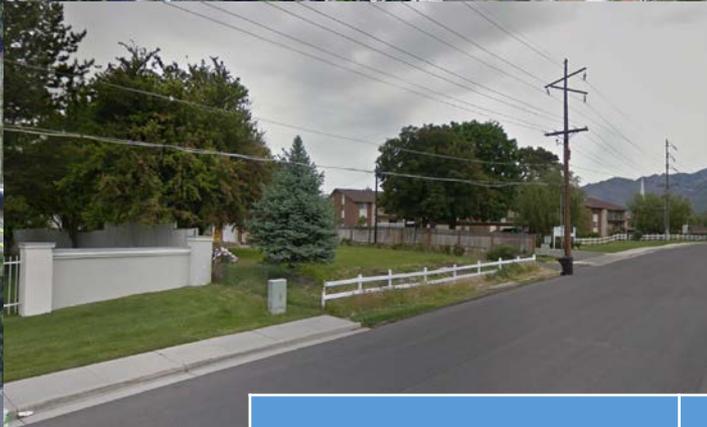
Program Year 2019	Estimated Cost	\$ 239,459
	TAP Funding	\$ 179,594
	Local Funding	\$ 59,865

Durfee Street; Quirk Street to Willow Street Construct Sections of Missing Sidewalk



Program Year 2018	Estimated Cost	\$ 233,270
	TAP Funding	\$ 174,952
	Local Funding	\$ 58,318

4705 South; 1380 East to 1450 East Construct Sections of Missing Sidewalk



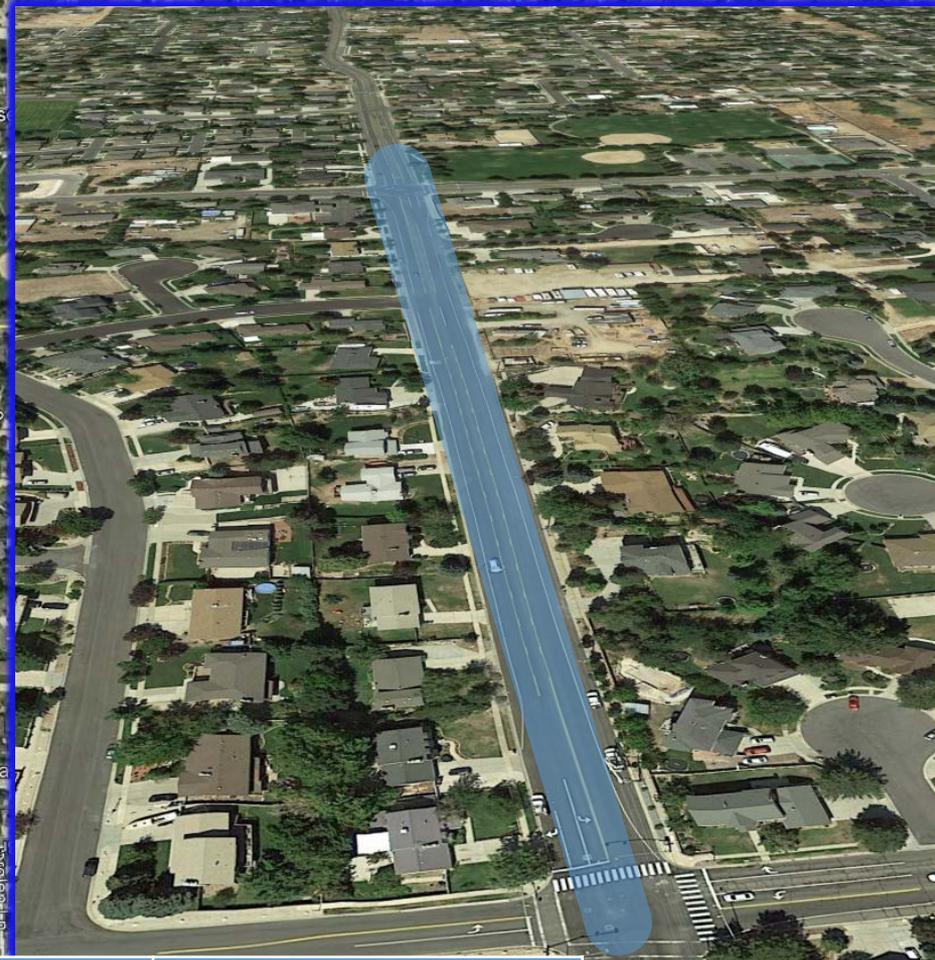
Program Year 2018	Estimated Cost	\$ 70,325
	TAP Funding	\$ 52,744
	Local Funding	\$ 17,581

6000 South; 5600 West to 5565 West Construct Sections of Missing Sidewalk



Program Year 2018	Estimated Cost	\$ 41,190
	TAP Funding	\$ 30,892
	Local Funding	\$ 10,298

1700 East; Wasatch Blvd to 11400 South Construct Bike Lanes



Program Year 2018	Estimated Cost	\$ 268,605
	TAP Funding	\$ 150,000
	Local Funding	\$ 118,605

County	Sponsor	PIN	Project Information		Estimated CMAQ Funds and Phasing (Fiscal Year)				Concept Development	
			Location/ Limits	Concept/ Type of Improvement	2019	2020	2021	2022	2023	2024
SALT LAKE/ WEST VALLEY URBAN AREA										
Salt Lake	UTA	15918	UTA Locomotive Rebuild	Rebuild locomotive prime mover engines to EPA's standard of Tier 1+	\$ 1,505,134	\$ -	\$ -	\$ -	\$ -	\$ -
Salt Lake	Murray/ UDOT	16941	State Street (US-89) and Vine Street Intersection	Intersection Improvements	\$ 290,411	\$ -	\$ -	\$ -	\$ -	\$ -
County	Sponsor	PIN	Project Information		Estimated CMAQ Funds and Phasing (Fiscal Year)				Concept Development	
			Location/ Limits	Concept/ Type of Improvement	2019	2020	2021	2022	2023	2024
OGDEN/ LAYTON URBAN AREA										
Davis	UTA	15915	Davis County Ski Route Buses	Purchase 2 buses for seasonal service from parts of Davis County to Snow Basin Resort.	\$ 912,830	\$ -	\$ -	\$ -	\$ -	\$ -

5c - FY 2018 Obligation Report

Wasatch Front Regional Council

February 21, 2019

Ben Wuthrich

Wasatch Front Regional Council



Obligation

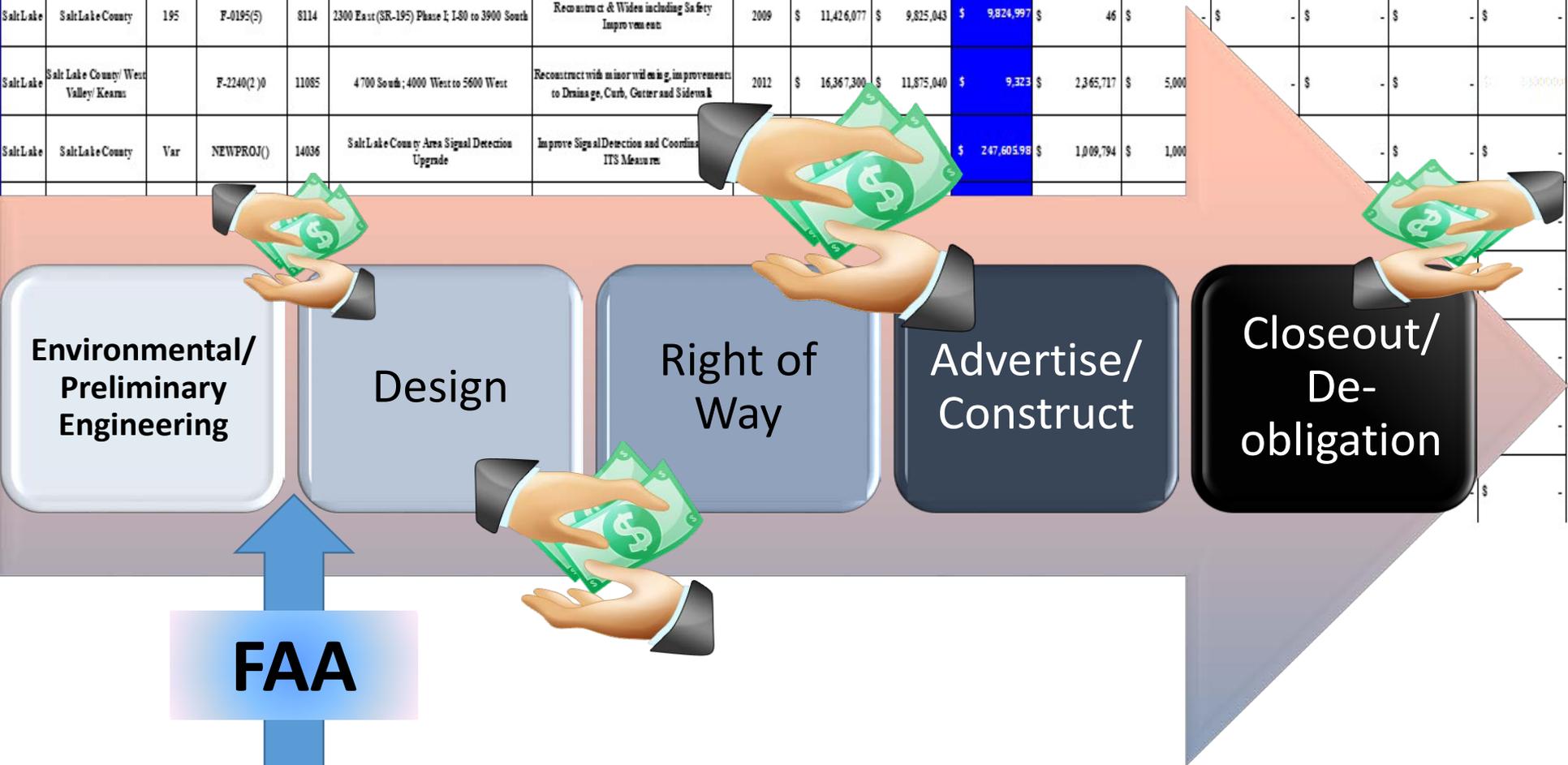
The Federal Highway Administration (FHWA) defines “obligation” as the federal government’s legal commitment to reimburse the States or other entities for the Federal share of a project’s eligible costs.

Thus, an obligated project is one that has been approved by the federal government for reimbursement.

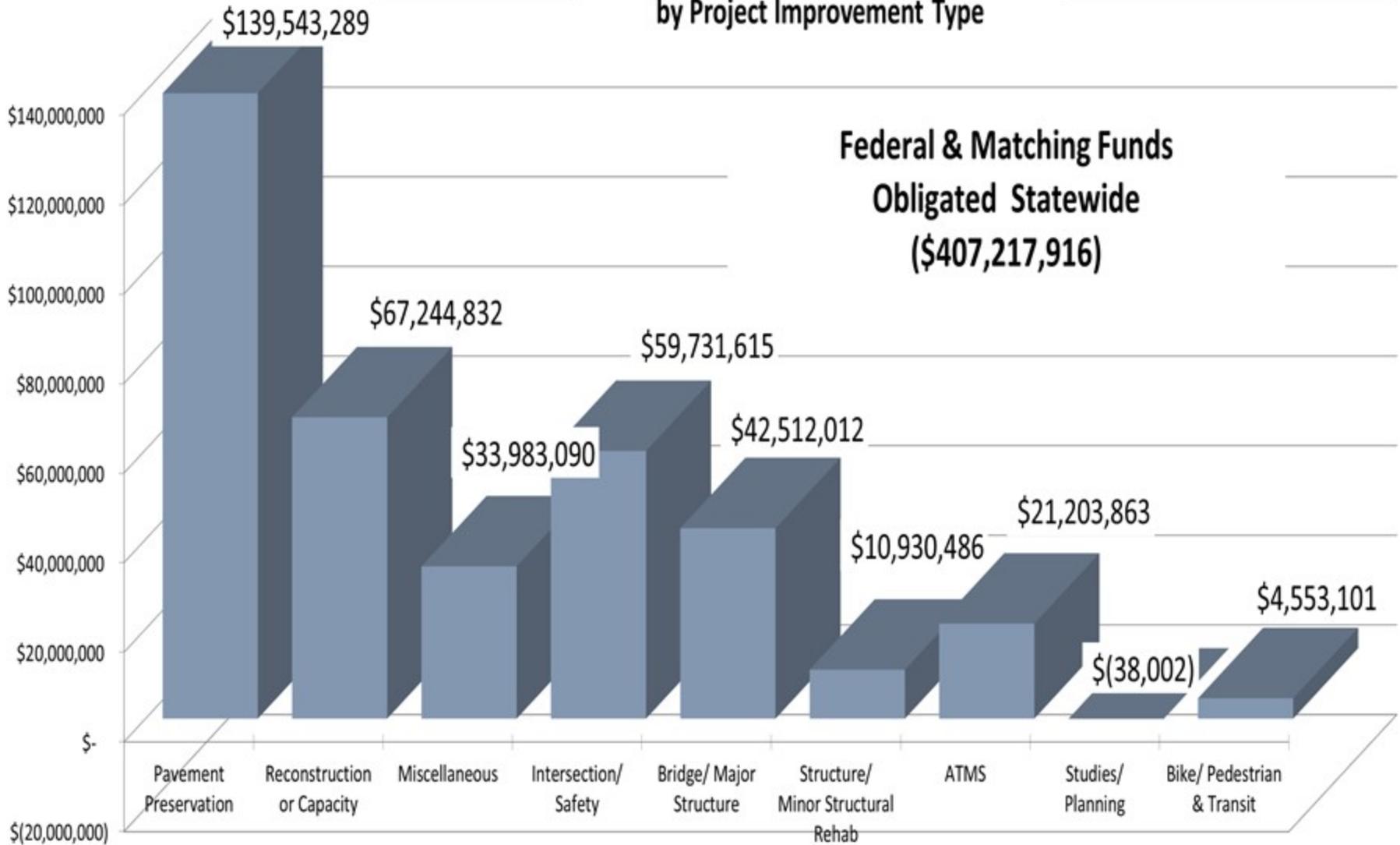
- Obligated projects were not necessarily initiated or completed during this year.
- Obligated amounts reflected in this report also may not be equal to the final project cost.

Project Process and Obligation of Funding

County	Sponsor	Route	Project Number	PIN	Project Information		Year Added to TIP	Estimated Total Project Cost	Original Funds Programmed	Total Amount Obligated	Estimated Funding and Phasing (Fiscal Year)				Concept Development	
					Location/ Limits	Concept/ Type of Improvement					2019	2020	2021	2022	2023	2024
SALT LAKE/ WEST VALLEY URBAN AREA																
Salt Lake	Salt Lake City		F-2076(1)	11083	1300 East; 1300 South to 2100 South	Reconstruction with minor improvements to Drainage, Curb, Gutter and Sidewalk	2012	\$ 11,099,000	\$ 6,426,097	\$ 1,347,174	\$ 5,078,924	\$ -	\$ -	\$ -	\$ -	
Salt Lake	Salt Lake City		NEWPROJ()	14932	300 North & 500 West	New Construction - Pedestrian/ Bicycle Railroad Overpass	2016	\$ 5,462,000	\$ 2,500,000	\$ -	\$ 2,500,000	\$ -	\$ -	\$ -	\$ -	
Salt Lake	Salt Lake County	195	F-0195(5)	8114	2300 East (SR-195) Phase I; I-80 to 3900 South	Reconstruct & Widen including Safety Improvement	2009	\$ 11,426,077	\$ 9,825,043	\$ 9,824,997	\$ 46	\$ -	\$ -	\$ -	\$ -	
Salt Lake	Salt Lake County/ West Valley/ Kearns		F-2240(2)0	11085	4700 South; 4000 West to 5600 West	Reconstruct with minor widening, improvements to Drainage, Curb, Gutter and Sidewalk	2012	\$ 16,367,300	\$ 11,875,040	\$ 9,323	\$ 2,365,717	\$ 5,000	\$ -	\$ -	\$ -	
Salt Lake	Salt Lake County	Var	NEWPROJ()	14036	Salt Lake County Area Signal Detection Upgrade	Improve Signal Detection and Coordinate ITS Measurement				\$ 2,47,605.98	\$ 1,009,794	\$ 1,000	\$ -	\$ -	\$ -	

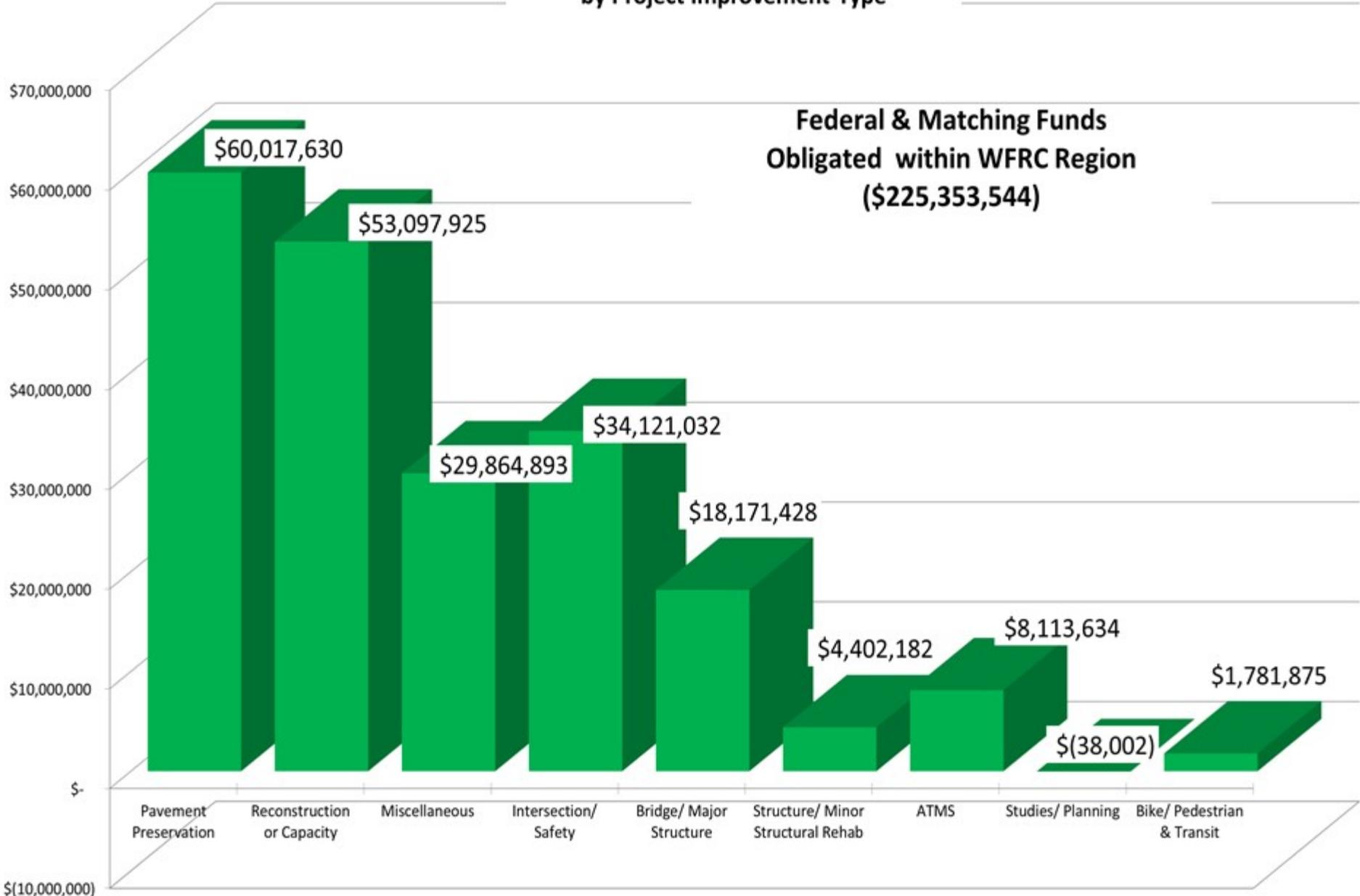


Statewide
FFY 2018 Federal Highway Funds Obligation
by Project Improvement Type



WFRC Region
FFY 2018 Federal Highway Funds Obligation
by Project Improvement Type

Federal & Matching Funds
Obligated within WFRC Region
(\$225,353,544)



WFRC FFY 2018 STP, CMAQ, & TAP Funds

Obligation by Project Improvement Type

Federal & Matching Funds

Administered by WFRC &

Obligated within WFRC Urbanized Areas

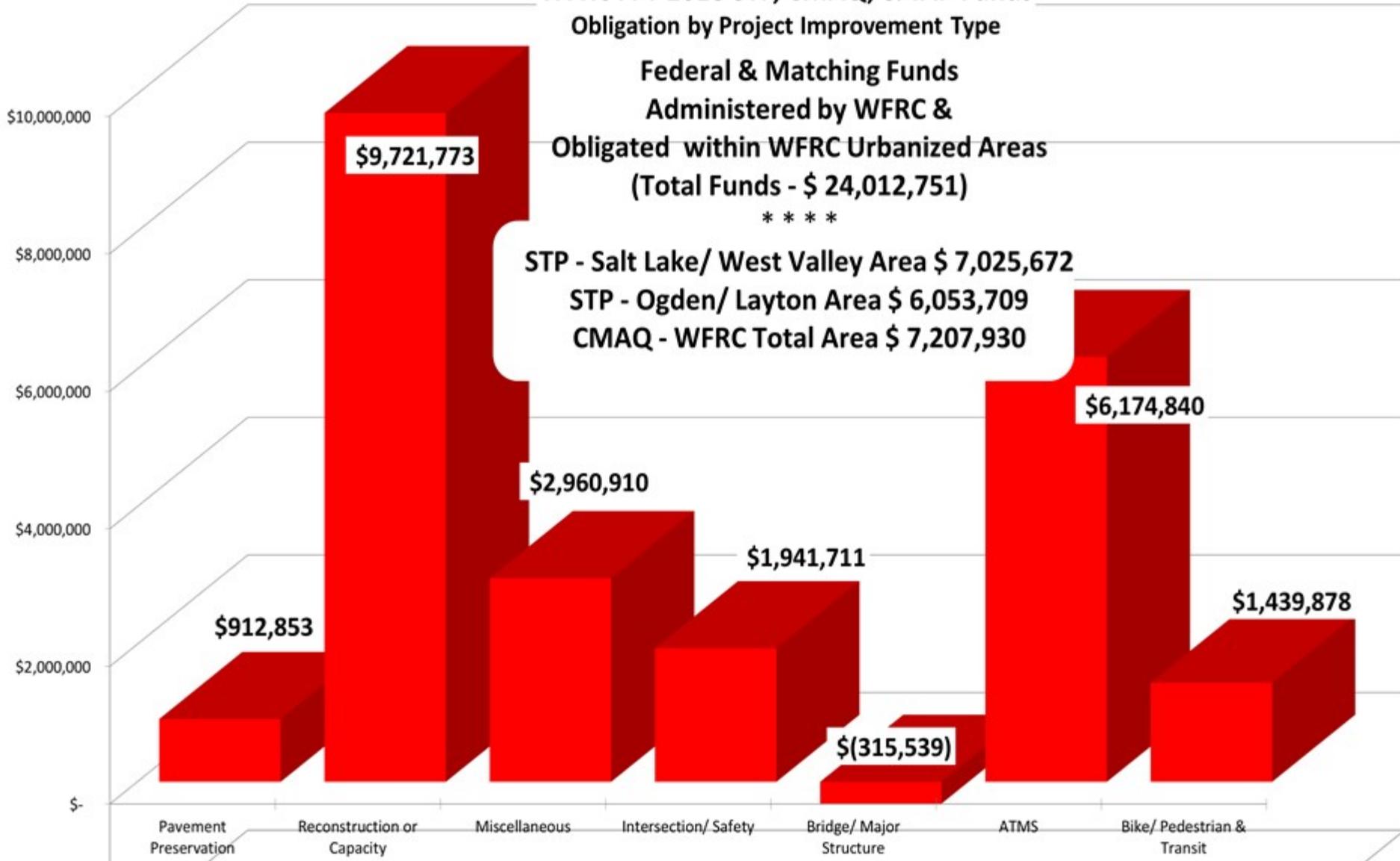
(Total Funds - \$ 24,012,751)

* * * *

STP - Salt Lake/ West Valley Area \$ 7,025,672

STP - Ogden/ Layton Area \$ 6,053,709

CMAQ - WFRC Total Area \$ 7,207,930



**** Note **** *Almost all Reconstruction or Capacity projects include active transportation components.*

**FFY 2018 Federal Transit Administration Funds
Obligation by Project Type**

**Federal & Local Matching Funds
(Total Amounts)**

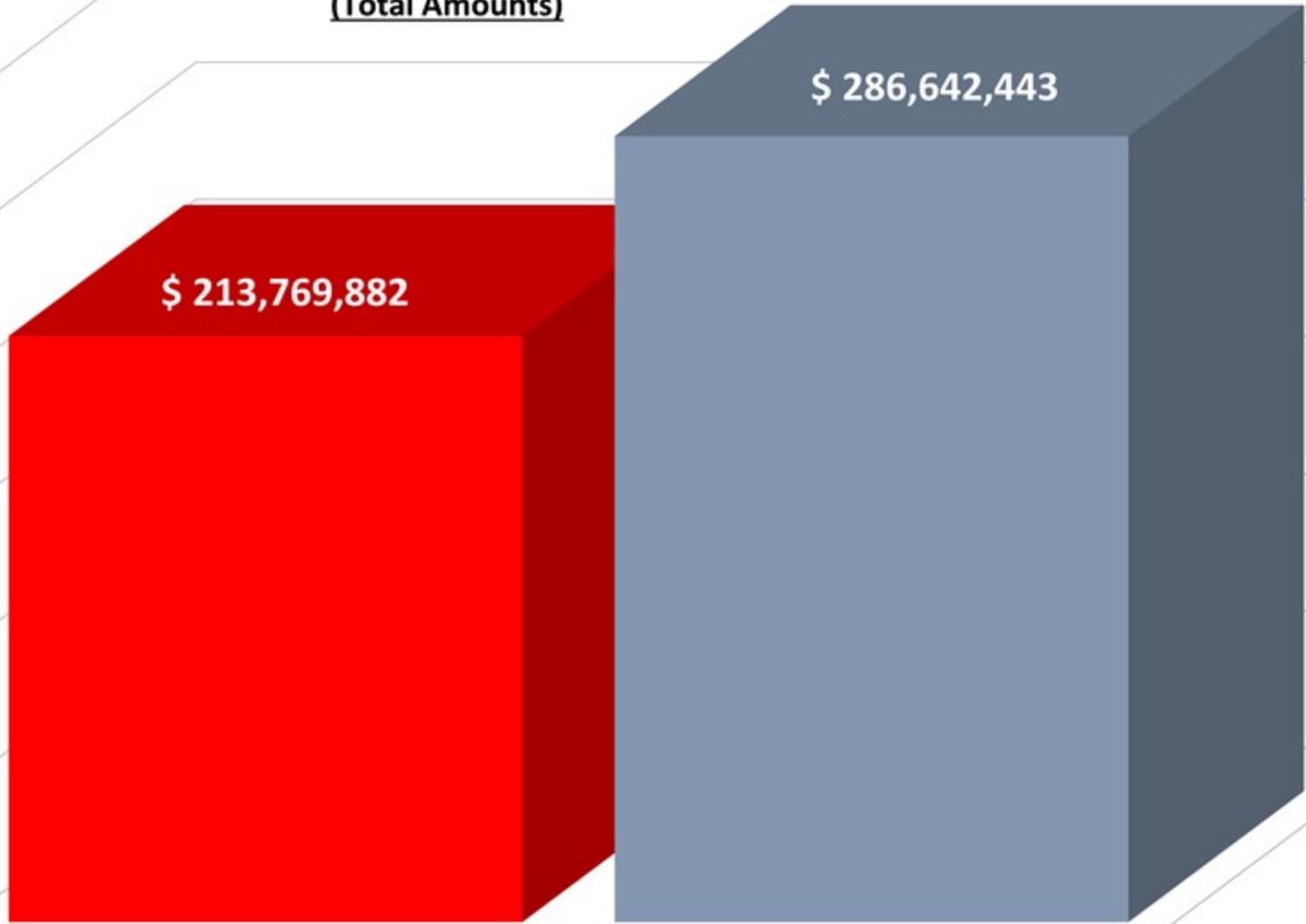
\$300,000,000
\$250,000,000
\$200,000,000
\$150,000,000
\$100,000,000
\$50,000,000
\$-

\$ 213,769,882

\$ 286,642,443

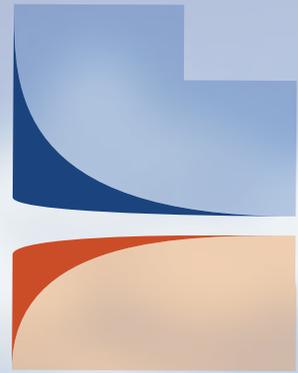
Capital Improvements

**Operation/ Planning &
Maintenance (O & M)**



WFRC Region
2018 Projects with Federal Highway Funds
Obligated/ (De_Obligated)

Plan Fund Desc.	PIN	PIN Status	Category	Project Location	County	Total Obl.	FA	STATE	LOCAL	TOTAL
	16851	Active	other	N/A Annual Work Program	VARIOUS	\$ 500,000	\$ 500,000	\$ 0	\$ 0	\$ 500,000
	16857	Awarded	Roadway Minor Rehab • Purple Book	I-15; MP 318.70 - 323.70	DAVIS	\$ 1,398,450	\$ 1,398,450	\$ 101,550	\$ 0	\$ 1,500,000
STP - JHC BRIDGE FUNDS UNDER MAPP-21 STP_BR	4950	Under Construction	Structures Bridge Replacement	Stoddard Lane over Weber River	MORGAN	\$ 994,544	\$ 994,544	\$ 0	\$ 72,220	\$ 1,066,764
	14776	Under Construction	Structures Bridge Replacement	Cnty:FA-2154; MP 2.31 - 2.31 & 6400 West 3975 South	SALT LAKE	\$ 734,093	\$ 734,093	\$ 0	\$ 53,307	\$ 787,400
	14777	Awarded	Asset Management	Cnty:FA-1104; MP 1.19 - 1.19 & Cnty:FA-1104; MP 4.43 - 4.43 & Route 1104 (6800 West / Iowa String Road) at 2880 North and 150 North	BOX ELDER	\$ 426,061	\$ 426,061	\$ 0	\$ 30,939	\$ 457,000
STP - URBAN AREA OGDEN / LAYTON (WFRC) STP_URB_O/L	11990	Active	Funding Pass Through	Project Planning Support -Weber & Davis County	DAVIS	\$ 300,000	\$ 300,000	\$ 0	\$ 21,785	\$ 321,785
	11993	Active	Roadway Reconstruct • With Widening	Larsen Lane; North Harrisville Road to Washington Blvd	WEBER	\$ 228,414	\$ 228,414	\$ 0	\$ 0	\$ 228,414
	13037	Close Out	Roadway Reconstruct • With Widening	SR-37; MP 9.51 - 12.35	WEBER	\$ 1,740,000	\$ 1,740,000	\$ 126,352	\$ 0	\$ 1,866,352
	13321	Close Out	Intersection Improvements	SR-193; MP 3.20 - 3.60	DAVIS	\$ 67,676	\$ 67,676	\$ 4,914	\$ 0	\$ 72,591
	13470	Closed	Roadway Preventative Maintenance	SR-204; MP .00 - .92 & SR-204; MP 2.23 - 5.42	WEBER	\$ 213,628	\$ 213,628	\$ 15,513	\$ 0	\$ 229,141
	14042	Substantially Compl	Roadway Reconstruct • With Widening	Cnty:FA-1410; MP .57 - .95 & 1500 South Phase 3; 1350 West to 1100 West	DAVIS	\$ 2,210,082	\$ 2,210,082	\$ 0	\$ 160,488	\$ 2,370,570
	14043	Active	Roadway Reconstruct • With Widening	Bluff Road; 550 West (on Gentile) to 1000 West	DAVIS	\$ 509,424	\$ 509,424	\$ 0	\$ 36,992	\$ 546,416
	14843	Scoping	Roadway New Construction (New Alignment)	500 West; 2000 South to SR-108	DAVIS	\$ 10,000	\$ 10,000	\$ 0	\$ 726	\$ 10,726
	14969	Closed	other	FY 2017 WFRC CPC Planning	SALT LAKE	(\$315,000)	(\$315,000)	\$ 0	\$ 0	(\$315,000)
	16250	Physically Complete	Roadway Minor Rehab • Purple Book	I-15; MP 319.50 - 341.80 & I-15; MP 319.50 - 341.80 & Various Locations	VARIOUS	\$ 699,225	\$ 699,225	\$ 50,775	\$ 0	\$ 750,000
	16849	Active	other	N/A Annual Work Program	SALT LAKE	\$ 390,260	\$ 390,260	\$ 0	\$ 0	\$ 390,260
STP - URBAN AREA SALT LAKE (WFRC) STP_URB_SL	8110	Awarded	Signal and/or Lighting Project	SR-152; MP 2.78 - 3.04 & Cnty:FA-2082; MP 11.82 - 12.57 & Cnty:FA-2116; MP 2.98 - 3.18	SALT LAKE	\$ 293,756	\$ 293,756	\$ 0	\$ 21,331	\$ 315,087
	8112	Closed	Roadway Reconstruct • Without Widening	Cnty:FA-2264; MP .00 - .88	SALT LAKE	(\$3,972)	(\$3,972)	\$ 0	(\$288)	(\$4,260)
	8565	Abandoned	Roadway Reconstruct • With Widening	HIGHLAND DRIVE @ I-215; I-215 WB ON-RAMP TO LA CRESTA	SALT LAKE	(\$289,013)	(\$289,013)	\$ 0	\$ 0	(\$289,013)
	11083	Active	Roadway Reconstruct • With Widening	1300 East; 1300 South to 2100 South	SALT LAKE	\$ 512,765	\$ 512,765	\$ 0	\$ 37,235	\$ 550,000



RUCUTAH

Trans Com

February 2018

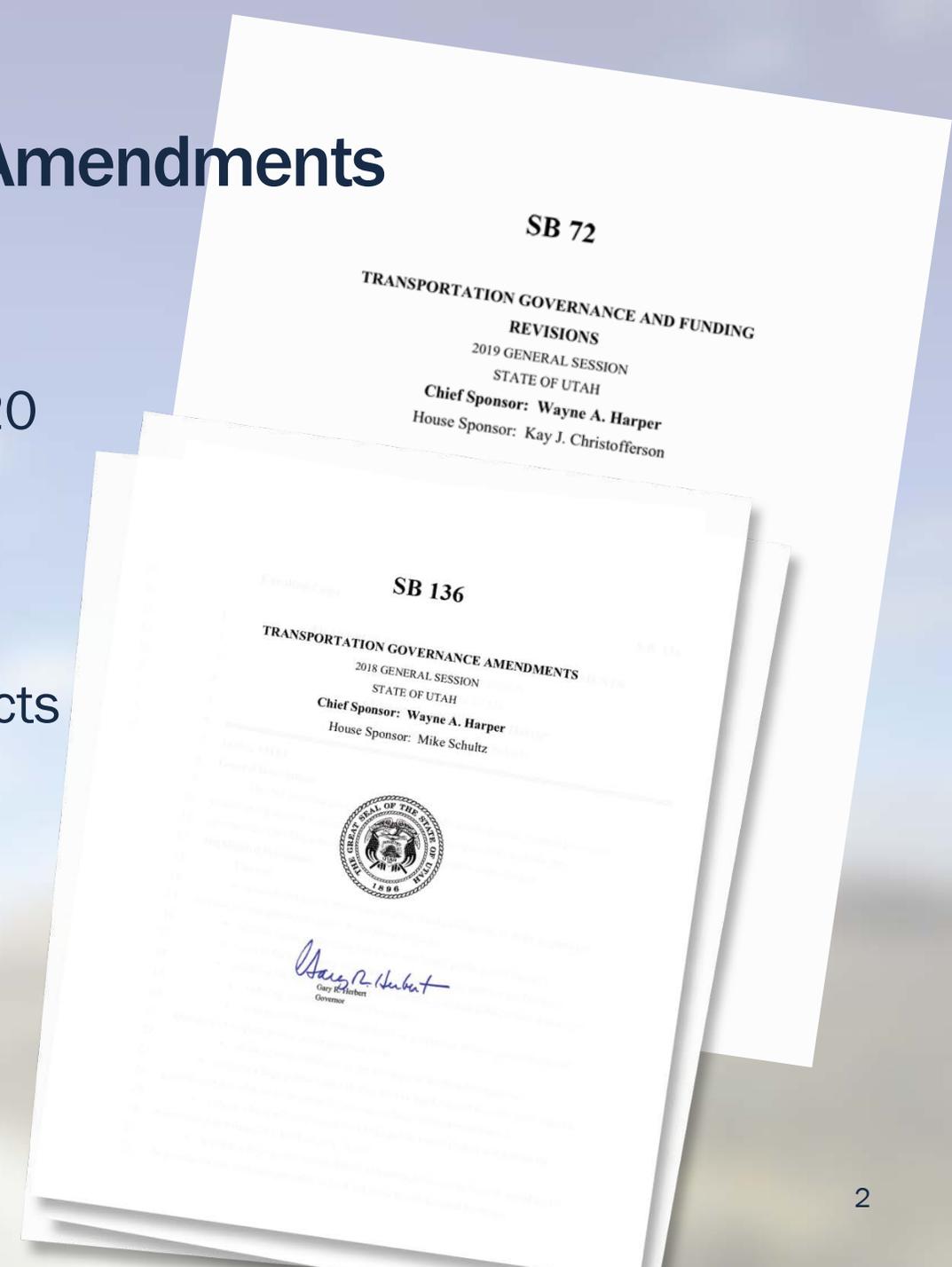
SB 136 (2018) & SB 72 (2019)– Transportation Governance and Funding Amendments

SB 136

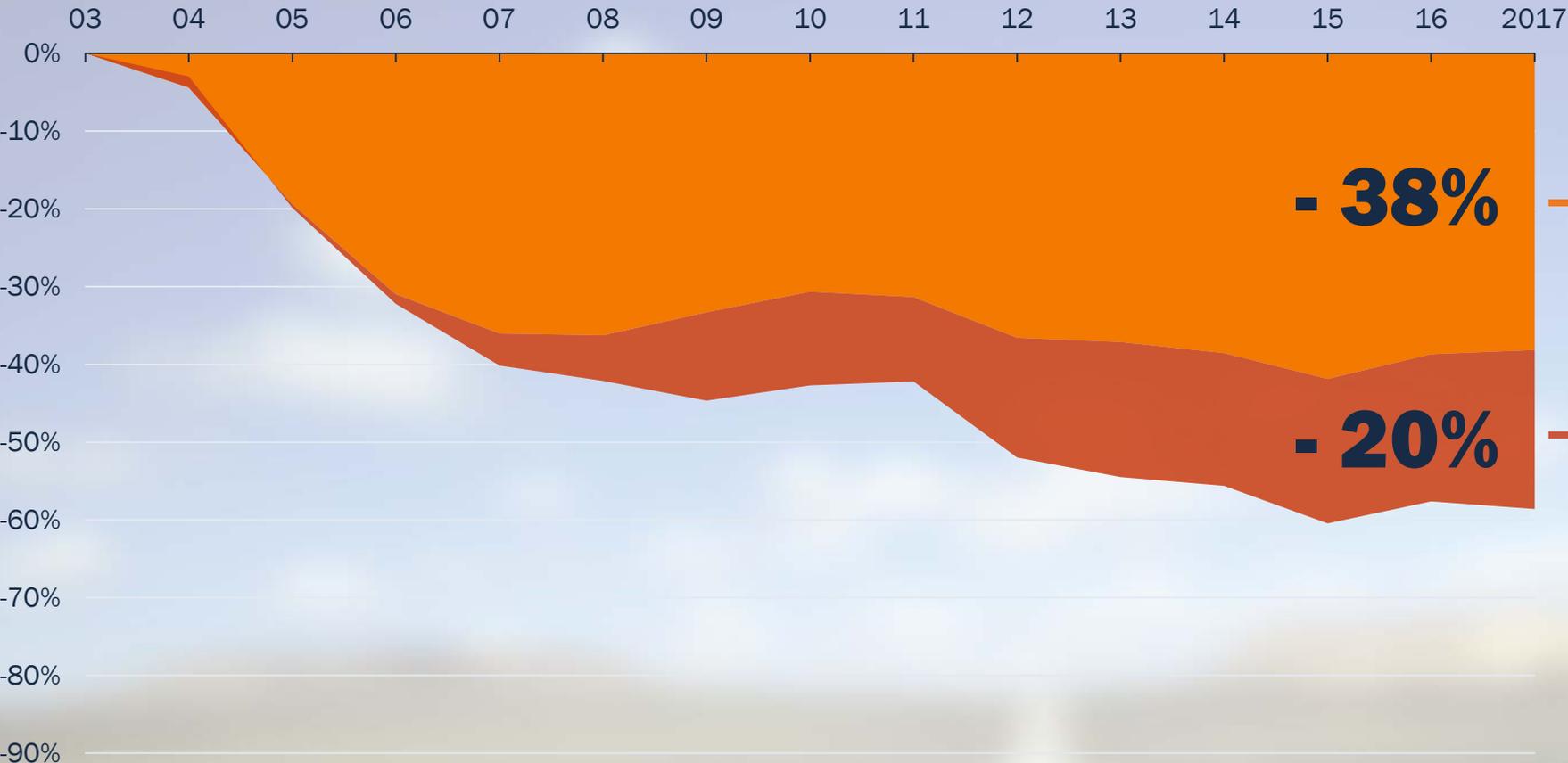
- Implement a Road User Charge (RUC) – Jan 2020
 - alternative to paying a flat fee for electric vehicles:
 - Eligible Types: EV, PEHV, Hybrids
- Establish a (RUC) Advisory Committee
- Report annually on program & Future pilot projects

SB 72

- Rulemaking authority for UDOT
- Rulemaking authority for Transportation Commission
- UDOT/DMV information sharing



Gas Tax Revenue Decline Across the Nation



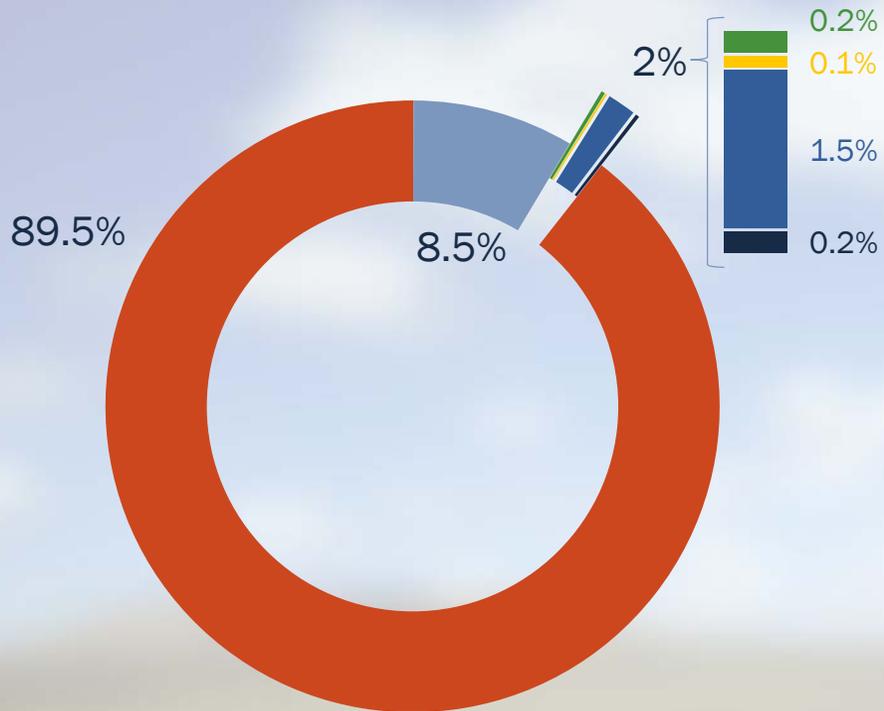
Utah efforts:

- Indexing
- Mileage-based RUC

■ Impact of Construction Cost Inflation ■ Impact of Fuel-efficiency Gains

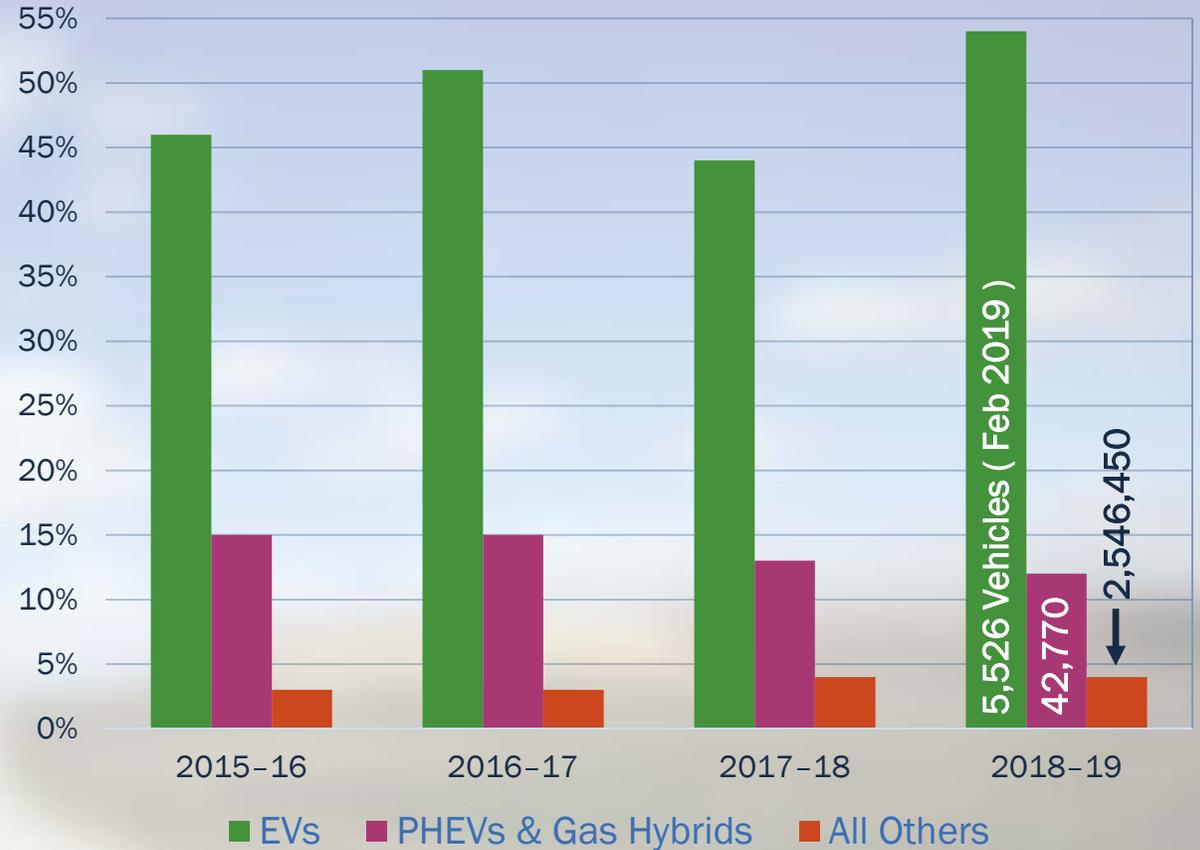
Size & Growth of Utah's Vehicle Fleet

Total Registered Vehicles
2,594,746 (2019)



Gasoline Diesel EV PHEV Gas Hybrid Other Alt Fuel

Year-over-year Growth (%)



Average Annual Gas Tax Payments



1. Based on 30 cents/gal State tax (gasoline/diesel) and 15,542 miles driven annually by average Utah vehicle.
2. Based on Federal tax of 18.4 cents/gal for gasoline and 24.4 cents/gal for diesel.
3. Pickup truck costs listed for both gasoline and diesel values; heavy truck costs listed for diesel only.

US Alternative Fuel Vehicle Flat Fees

National

ANNUAL FEES

EVs
PHEVs
Gas Hybrids

	RANGE	AVERAGE
EVs	\$50-\$200	\$112
PHEVs	\$30-\$130	\$72
Gas Hybrids	\$20-\$100	\$57

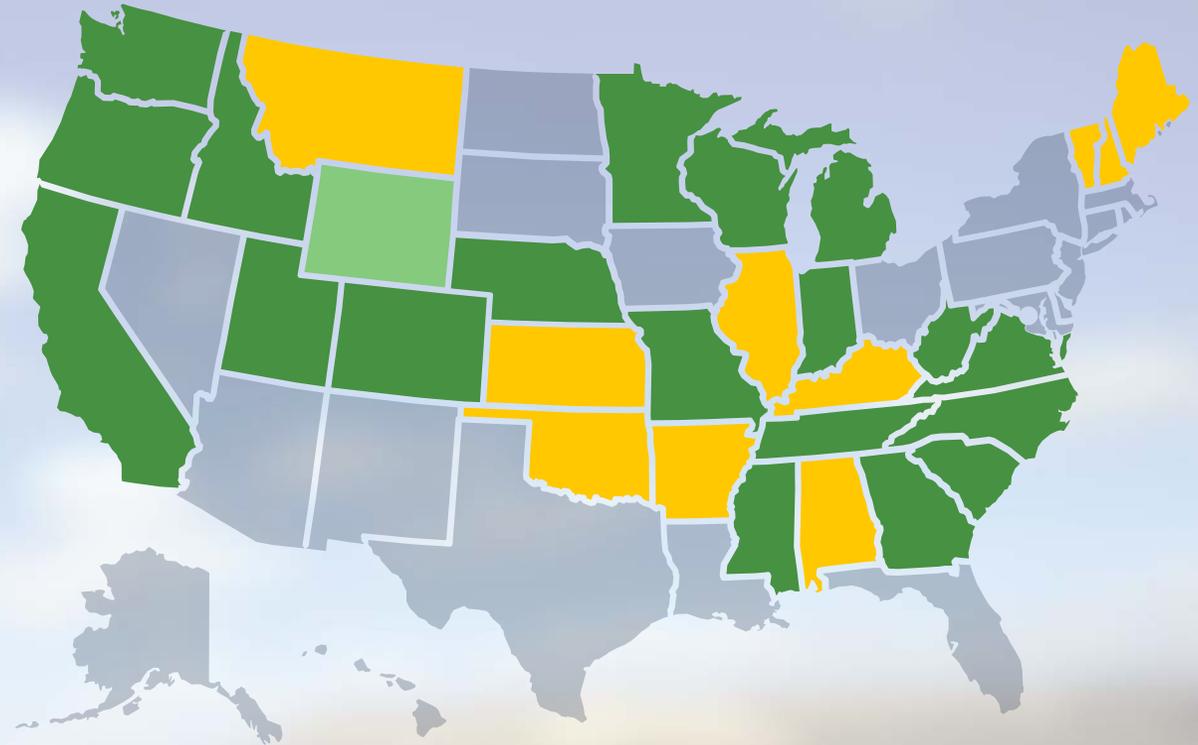
Utah

ANNUAL FEES

EVs
PHEVs
Gas Hybrids

	2019	2020	2021*
EVs	\$60	\$90	\$120
PHEVs	\$26	\$39	\$52
Gas Hybrids	\$10	\$15	\$20

* Fees are indexed to CPI after 2021



- Considered annual fees (10 states)
- Adopted annual fees (19 states)
- Adopted one-time fees (1 state)

Elements of a Utah RUC System Based on Advisory Committee Input

Data Collection Tech

-  OBD-II GPS Devices 16
-  Odometer Capture 2
-  Telematics 2
-  Smartphone Apps 15

Vehicle Types

-  EV 16
-  PHEV 16
-  Gas Hybrid 16
-  Autonomous 0
-  Gas/Diesel 16
-  Heavy Truck 2

Systems/Processes

-  DMV Registration 0
-  Out-of-state Detection 16
-  Public/Private Roads 16
-  Regional Interop. 14
-  Tolling Integration 12
-  Paved/Unpaved Roads 0
-  Federal/State Lands 0

-  Element at launch
-  Element under discussion
-  Potential future element
-  # Number of other states considering or using element

Questions?



Connected and Automated Vehicles: Dealing with a Changing Paradigm

Blaine D Leonard, P.E., F.ASCE
Technology & Innovation Engineer
Utah Department of Transportation



A New Transportation Paradigm



00000000	0000	0001	0001	1010	0010	0001	0004	0128
00000010	0000	0016	0000	0028	0000	0010	0000	0020
00000020	0000	0001	0004	0000	0000	0000	0000	0000
00000030	0000	0000	0000	0010	0000	0000	0000	0204
00000040	0004	8384	0084	c7c8	00c8	4748	0048	e8e9
00000050	00e9	6a69	0069	a8a9	00a9	2828	0028	fdfc
00000060	00fc	1819	0019	9898	0098	d9d8	00d8	5857
00000070	0057	7b7a	007a	bab9	00b9	3a3c	003c	8888
0000							88	8888 8888
0000							8e	8828 8888
0000							5f	8814 8188
0000							f3	88bd e988
0000							71	688e 958b



And a New Driver



The UDOT CAV Program

THE FIVE PILLARS OF THE UDOT CAV PROGRAM

Connected and Automated Vehicles (CAV) are advancing rapidly and will soon be a reality on our roadways. UDOT believes that CAV represents the next opportunity for a significant leap forward in both traffic safety and mobility. It is UDOT's goal to be at the forefront of CAV development and implementation, and in the process to accelerate the realization of the safety and operational benefits of these technologies.



TECHNOLOGY ADVANCEMENT

Developing UDOT's technological capabilities is crucial to advancing the state of the practice in Utah and across the nation.

Priorities: Expand the implementation of Multi-Modal Intelligent Traffic Signal System (MMITSS) to the TRIP BRT project, and in snow plows on key routes around the state



ACADEMIC COLLABORATION

Collaboration with Utah's Universities is critical to a vibrant and successful CAV community.

Priorities: Data analysis, Human factors investigation, development of safety applications



POLICY & LEGISLATION

Oversight for safety and efficiency is instrumental in CAV advancement. Policy and legislative decision makers need to be well informed.

Priorities: Legislative coordination, facilitation of demonstrations, Task Force establishment



PRIVATE SECTOR ENGAGEMENT

Strategic partnerships will strengthen the success of UDOT's CAV program and can be instrumental in bringing high-paying jobs to Utah.

Priorities: Development of safety applications, product testing and development



OUTREACH & GROWTH

Strategically sharing the UDOT CAV story will attract partners and strengthen economic development.

Priorities: Strategic outreach plan, education and marketing materials



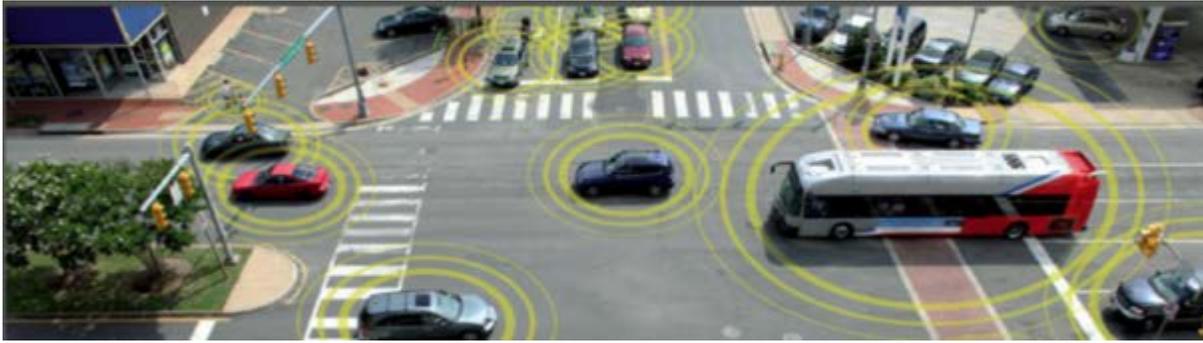
Automated Vehicles use various **sensor** technologies:

- LiDAR
- Digital Imagery (camera)
- Radar Sensors
- GPS

. . . to sense their surroundings and take some (or all) driving functions from the human driver

INFORMATION BASED ON WHAT THE VEHICLE CAN “**SEE**”





The **Connected Vehicle** system uses wireless technologies to exchange information with:

- Other vehicles (V2V),
- Roadside infrastructure (V2I), and
- Other travelers (peds, bikes, etc) (V2X)

... to help the driver **avoid hazards** and drive more **efficiently**

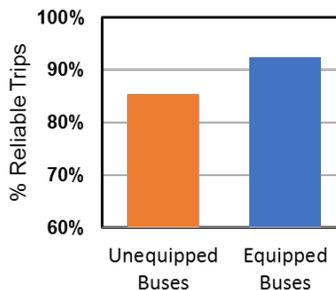


INFORMATION BASED ON WHAT
THE VEHICLE CAN “**LEARN**”



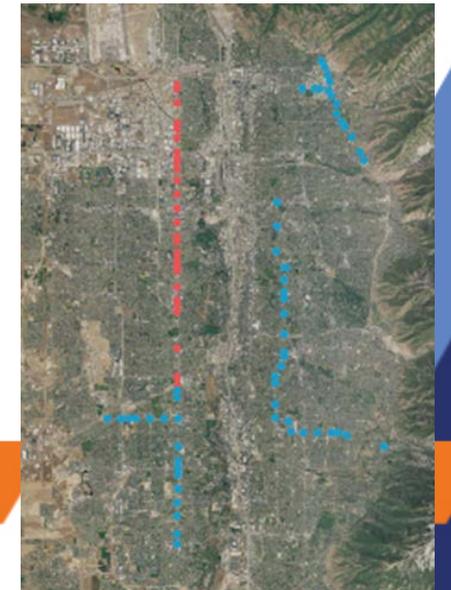
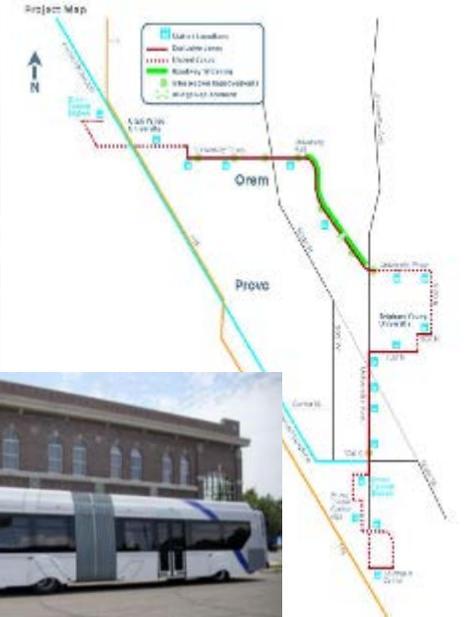
Redwood Road Connected Vehicle Project

- Transit Signal Priority (TSP)
 - Grant conditional priority when bus is behind schedule
 - Goal to improve transit schedule reliability
- DSRC wireless communication technology
 - 24 signalized intersections
 - 10 UTA buses
- Operational since Nov 2017
- Schedule reliability improved by 6%
 - Minimal impact to other traffic



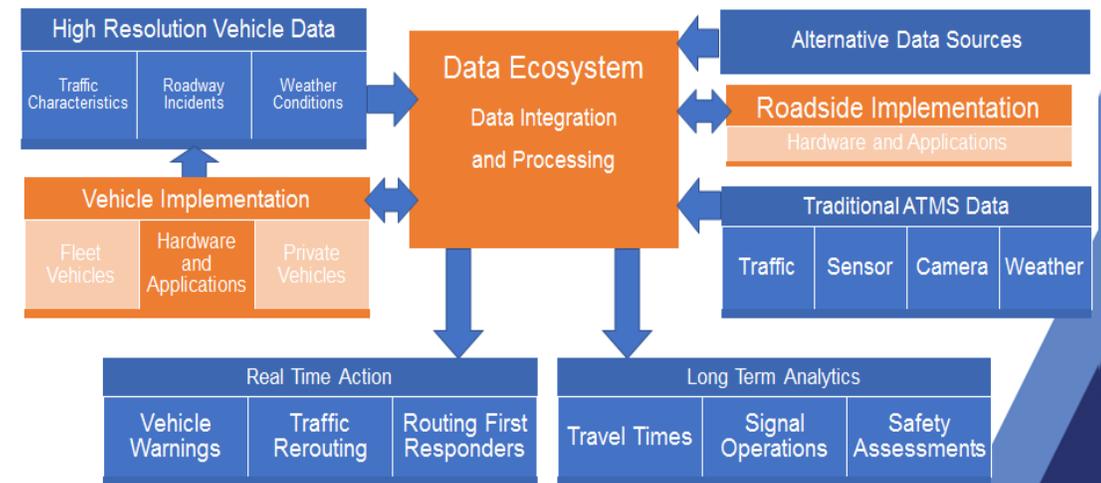
Additional Deployments

- Provo-Orem BRT Project (UVX)
 - Transit Signal Priority using DSRC
 - 10.5-mile corridor
 - 47 Signalized Intersections
 - 25 Buses
 - Operational December 3, 2018
- Snow Plow Pre-emption Project
 - Salt Lake Valley – 5 corridors
 - 55 Additional Intersections
 - 46 Snow Plows
 - Operational in March 2019



Connected Vehicle Data Ecosystem

- Manage the expected explosion of data
 - Processing data into actionable information
 - Data storage decisions
 - Securing the data
 - Maintaining privacy
- Software applications
 - Roadside applications
 - On-board implementation
 - Pull vehicle data
 - Push information to vehicles
 - Work with automakers
- Expand hardware deployment
- Integrate with UDOT TOC



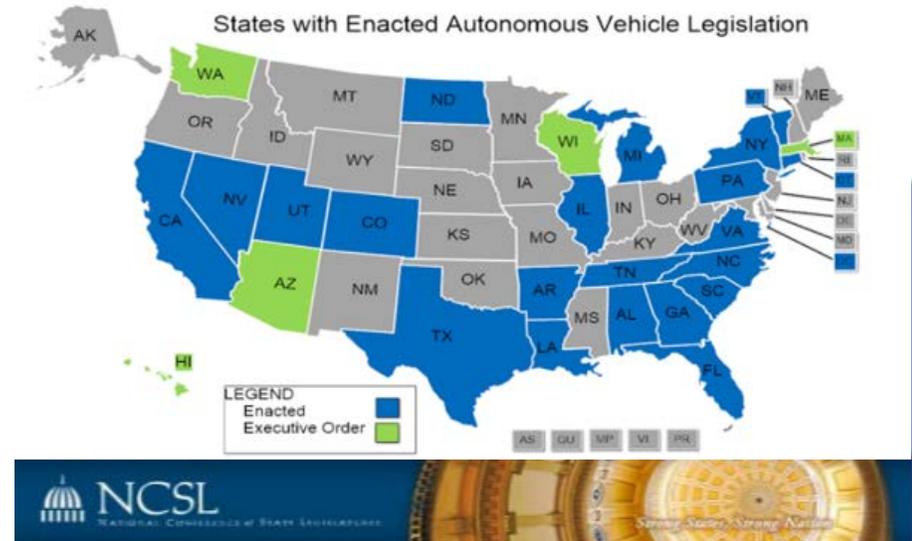
AV Shuttle Project

- Deploy AV Shuttle in several locations
 - Driverless shuttle (with a “host”)
 - Vehicle being leased from EasyMile
 - April 2019 – March 2020
- Joint UDOT / UTA Project
- Study potential uses and capabilities
 - First mile – last mile solution
 - Operational characteristics
- Broad discussion about vehicle autonomy
 - Evaluate public responses / attitudes / trust



Autonomous Vehicle Legislation

- HB 101 in 2019 Legislative session
 - Sponsor: Rep. Robert Spendlove
 - Developed by coalition of agencies and private sector interests
 - Passed the House (yesterday)
 - Senate Floor Sponsor: Sen. David Buxton
- Issues include:
 - Permission to operate on Utah roads
 - Facilitate testing and operation
 - Definitions of terms
 - Clarification of registration / responsibility
 - Monitoring safe (or unsafe) behavior





LTDOT
Keeping Utah Moving

